

Applicant: Robin Budd, *et al.*
U.S.S.N.: 09/895,466
Filing Date: 6/29/2001
EMC Docket No.: EMC-00-066

REMARKS

Applicants thank the Examiner for his careful review of the subject application. The Office Action mailed April 15, 2008 has been carefully considered. In this Office Action, Claims 1-3, 5, 6, and 8-16 have been rejected and remain pending. Claims 1-3, 5, 6, and 8-10 have been rejected under 35 USC 103. Claims 11-13 and 16 have been rejected under 35 USC 102. Based on the arguments presented herein, Applicants respectfully request reconsideration and removal of the aforementioned rejections.

35 USC 103

The Office Action rejected Claims 1-3, 5, 6, and 8-10 under 35 USC 103 as unpatentable over Ohran (US 5,812,748), hereinafter Ohran, in view of Vinther et al (WO 92/18931), herein after Vinther. Claim 1 is an independent claim, Claims 2, 3, 5, 6, and 8-10 are dependant on Claim 1, and, for the sake of brevity, these rejections will be argued together. Applicants respectfully assert that Ohran and Vinther can not be used as a proper 35 USC 103 rejection for Claims 1 and 11 as they do not satisfy the KSR test as promulgated by the Supreme Court. In *Teleflex v. KSR*, the Supreme Court stated that a proper 35 USC 103 rejection requires the following steps be performed: (1) Determining the scope and content of the prior art; (2) Ascertaining the differences between the claimed invention and the prior art; and (3) Resolving the level of ordinary skill in the pertinent art. *Teleflex Inc. v. KSR Int'l Co.* 127 S.Ct. 1727, 1741, 82 USPQ.2d 1385, 1396 (2007). This three part test has also been reemphasized and promulgated in the Federal Register. *Federal Register*, Vol. 72, No. 195.

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With respect to the first prong of KSR, Ohran states he provides “a method for providing a rapid recovery from a network file server failure. Ohran further states “[i]n the event of failure of the file server computer, the backup computer can replace the file server, using the copy of the file server’s data stored on its disks.” As well, Ohran states “[u]nlike other redundant file server configurations, this method does not require the backup computer system to be running the file server operating system.”

Applying the first prong of KSR to Vinther, Applicants assert Vinther describes “a fault tolerant network file system having a primary fileserver and a backup fileserver which mirrors the primary. When the primary fails, the backup assumes the role of the primary on the network in a manner transparent to users whose files are stored on the primary.” However, neither Vinther nor Ohran describes “determination of the unavailability of the primary network.”

With respect to the second prong of KSR, the Office Action states that Ohran determines “the unavailability of the primary network and that the transmission is a write packet,” and Applicants respectfully disagree. Applicants assert that Ohran discloses the step of “waiting to detect a failure of another server’s computer,” does not disclose “determination of the unavailability of the primary network,” and this difference is an important distinction between Ohran and the current invention. Applicants further assert that Vinther does not rectify the deficiency of Ohran and teach “determination of the unavailability of the primary network.”

Applicants assert Ohran provides “probing the status of the other server’s computer” “to detect a failure of another server’s computer.” Column 7 lines 24-27. Upon detection of a failure Ohran performs the step of “discontinuation of mirroring information on the failed server.” Column 7 lines 44-45. Following this, Ohran states “the method sets connection means

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to disconnect mass storage system from computer of failed server, and to connect it to computer of non-failing server.”

Applicants respectfully assert that detecting failure of a “server” or “computer” is materially different than detection of a failure of a “primary network,” which Applicants assert neither Ohran nor Vinther disclose. To highlight this difference Applicants turn to page 17 of their disclosure which states:

[I]f the Internet connection were to fail, in previous systems, the datagrams that would normally pass between the computers 12 and 13 would go undelivered even though both computers 12 and 13 were still operating correctly . . . each node would assume the other node(s) failed and each initiate their fail-over sequence . . . This situation always will cause a node in a cluster application to expend unnecessary resources in effectuating failover . . . If there existed an alternative transport mechanism that could provide functionality, the heartbeat datagrams, in this example, would continue to be delivered, just as if the primary communication mode were available. Therefore an unnecessary failover would not be initiated.

Applicants further assert that Ohran provides a method for failovers. That is, Ohran is directed towards a different problem than the current invention and therefore has different steps. The current invention, in an embodiment, seeks to address the case when “an unnecessary failover would not be initiated.” Conversely, Ohran seeks to address the case when a failover is necessary. Ohran seeks to address the failover by “disconnect[ing] [the] mass storage system from computer of failed server, and to connect it to computer of non-failing server.”

Applicants have fully considered the Office Action’s “Response to Arguments,” which begin on page 2 of the Office Action. Applicants thank the Examiner for explaining what portions of Ohran are asserted in the Office Action to disclose “determination of the

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unavailability of the primary network.” However, based on Applicants’ understanding of the quoted portion of Ohran, as well as Ohran in toto, Applicants still respectfully assert that neither Ohran nor Vinther disclose “determination of the unavailability of the primary network.”

Specifically, the Office Action asserted that Ohran discloses “until the availability of the primary network between the applications to one of the two servers is detected” at the following portions of Ohran “steps 310 [sic 301], 302 in fig. ; col. 7 lines 24-26; col. 7 lines 44-46,” Applicants respectfully assert that this refers only to detection of a server failure not “determination of the unavailability of the primary network.” Referring to Figure 3, Ohran’s step 301 is “failure of other processor” and step 302 is “discontinue mirror copy on other computer system.” Applicants assert that step 301 refers to detection of a “failure of a processor” not “determination of the unavailability of the primary network.” As well, step 301 refers to an action taken after “failure of a processor” not “determination of the unavailability of the primary network.”

Referring to col. 7 lines 24-36, Ohran states “[t]he method starts in step 301 with each computer 11 and 122 waiting to detect a failure of another server’s computer 111 and 122. Such failure can be detected by probing the status of the other server’s computer by a means appropriate to the particular operating system ...” Applicants again respectfully assert that the quoted portion of Ohran only discloses “detect[ing] failure of another server’s computer” not “determination of the unavailability of the primary network.”

Finally, referring to col. 7 lines 44-46, Ohran further states “[i]n step 302, detection of the failure of server 121 causes the discontinuation of mirroring information on the failed server 121. This discontinuation can either be done automatically by the operating system upon detection of

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the failure server 121 ...” Applicants respectfully assert that this section discloses a failover response, e.g. a response—“the discontinuation of mirroring information on the failed server,” when a failover, “failure of server” has occurred. Applicants assert that Ohran discloses detection of and responding to a failover and Applicants also assert that Ohran does not disclose “determination of the unavailability of the primary network.”

Turning to the third prong of KSR, Applicants assert that one skilled in the art of Vinther or Ohran would be one who is skilled in the relevant computer arts. Applicants further assert that one skilled in the relevant computer arts would not arrive at the current invention. In both Vinther and Ohran, Applicants assert that neither seeks to address identifying and correcting failure of a “primary network,” rather both Vinther and Ohran disclose identifying and correcting failure of a back-up system in a network. Applicants assert that a feature of the current application addresses a divergent problem, ensuring that “an unnecessary failover would not be initiated.” Therefore, one skilled in the art would not combine Vinther, Ohran, and his knowledge to arrive at the current invention.

Based on the foregoing Applicants respectfully assert that Ohran and Vinther may not be used for a proper 35 USC 103 rejection. Consequently, Applicants respectfully request removal of the rejection of Claim 1 and that this claim be put in condition for allowance. As Claims 2, 3, 5, 6, and 8-10 depend from Claim 1, and Claim 1 is believed allowable, Claims 2, 3, 5, 6, and 8-10 should be allowable for at least the same reasons. Therefore, Applicants also request removal of the rejections of Claims 2, 3, 5, 6, and 8-10 and that these claims be placed in condition for allowance.

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35 USC 102

The Office Action rejected Claims 11-13 and 16 under 35 USC 102 based on Ohran et al. [US 5,812,748], herein after Ohran. With respect to “determination of the unavailability of the primary network,” the Office Action rejected claims 11-13 and 16 for substantially the same reasons as it rejected Claims 1-3, 5, 6, and 8-10 under 35 USC 103. Applicants respectfully assert that Ohran discloses the step of “waiting to detect a failure of another server’s computer,” does not disclose “determination of the unavailability of the primary network,” and this difference is an important distinction between Ohran and the current invention. Applicants incorporate the arguments presented above and based on these arguments respectfully assert that Ohran does not disclose each and every element of the claimed invention as is necessary for a 35 USC 102 rejection. Not disclosing each and every element of the claimed invention, Ohran may not be used as a 35 USC 102 rejection. Therefore, Applicants respectfully request removal of the 35 USC 102 rejection of Claims 11-13 and 16 and that these claims be put in condition for allowance.

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Conclusion

In view of the foregoing, the Applicants believe that the application is in condition for allowance and respectfully request favorable reconsideration.

In the event the Examiner deems personal contact desirable in the disposition of this case, the Examiner is invited to call the undersigned agent at (508) 293-7450.

Please charge all fees occasioned by this submission to Deposit Account No. 05-0889.

Respectfully submitted,

Dated: 7/9/08

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